

Appln No. 09/603,812
Amdt date October 24, 2003
Reply to Office action of July 24, 2003

REMARKS/ARGUMENTS

Claims 1 to 8 and 10 to 13 are pending in this application. Claims 1-8 and 11-12 have been amended, and new claim 13 has been added.

The Examiner objected to claims 5 and 6 as being dependent on rejected claims, but indicated that these claims would be allowable if placed into independent form. Applicants have amended claims 5 and 6 to place them into independent form with all of the limitations of amended claim 1, thereby placing them into allowable form.

The Examiner rejected claims 1, 2, 4, 7, 8, and 10-12 under 35 U.S.C. § 102(b) as anticipated by Barreras, Sr. et al. (U.S. Patent No. 5,735,887). The Examiner also rejected claims 1, 2, 4, 7, 8, 11, and 12 under 35 U.S.C. § 102(b) as anticipated by Schulman, et al. (U.S. Patent No. 5,531,774), and claims 3 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Barreras, Sr. et al., and Schulman, et al., respectively, in light of the knowledge of one of ordinary skill in the art. Finally, the Examiner also rejected claims 1, 7, 8, and 10-12 under 35 U.S.C. § 103(a) as being unpatentable over Weijand, et al. (U.S. Patent No. 5,999,857), in light of the knowledge of one of ordinary skill in the art. Applicants respectfully traverse these rejections.

The Examiner argues that both Schulman, et al. and Barreras, Sr. et al. disclose the claimed invention including, in the case of Schulman "the use of the receiver 200 containing

Appln No. 09/603,812

Amdt date October 24, 2003

Reply to Office action of July 24, 2003

diodes and energy storage capacitors to generate a DC voltage for the power supply section for the operation of the receiver . . . [and] the use of down converter and capacitors, 203B, in column 25 for use in supplying power for the transmission circuit.", and in the case of Barreras, Sr. et al. "capacitor 73 being used to supply energy for the reception of data and capacitor, 105, supplying energy for the transmission of data." Moreover, the Examiner contends that Weijand, et al. disclose the claimed invention stating "[p]ower supply (battery 66) is the energy means for the telemetry receiver and capacitors 12a and 12b are the energy storage means for the transmitter". However, previously the Examiner acknowledged that in none of these references do the cited capacitors provide sufficient energy to the relevant components to completely power the transmission or reception of data, and that the battery in each reference supplies energy to both components simultaneously. Moreover, the Examiner acknowledges in this office action that Weijand, et al. do not even disclose the use of buffer capacitors in their invention.

Amended independent claim 1 recites: "An electromedical implant . . . comprising . . . at least two power supply buffer capacitors . . . with one of the at least two power supply buffer capacitors for providing sufficient energy for the telemetry transmitter to transmit data, and . . . one of the at least two power supply buffer capacitors for providing sufficient energy for the telemetry receiver to receive data."

Applicants' claims 11 and 12 also recite: "...wherein the telemetry transmitter is connected to one of the power supply

Appln No. 09/603,812

Amdt date October 24, 2003

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buffer capacitors for transmitting data, and the telemetry receiver is connected to a separate one of the power supply buffer capacitors for receiving data."

Therefore, the quoted elements of Applicants' claims are absent from all of the Schulman, et al., Barreras, Sr. et al., and Weijand et al. references and therefore make Applicants' claims novel and unobvious. Not only do the capacitors disclosed in both the Weijand et al. and Barreras, Sr. et al. references not provide "sufficient" energy for either the transmitter to transmit or the receiver to receive data, as acknowledge by the Examiner in his official Action (See, for example, 2/25/03 Official Action; Page 2; 2nd and 3rd Paragraphs), but the capacitors cited by the Examiner as providing power to the receiving and transmission components of the prior art devices can in no way be defined as "power supply buffer capacitors" as required by Applicants' claims.

Indeed, a review of the capacitors recited in the Barreras, Sr. et al. reference reveals that nowhere does the reference describe separate and independent power supply capacitors for use in powering the transmitter and receiver. Specifically, only one of the capacitors cited by the examiner (capacitor 73) serves specifically as a "buffer capacitor" (see col. 11, lines 19-32). The other capacitor, (capacitor 104) is again merely part of an oscillator consisting of an inductor (80) and a tuning capacitor (105). Therefore there is no capacitor in the transmission circuit of the Barreras, Sr. et al device that serves as an "power supply buffer capacitor" as claimed by Applicants.

Appln No. 09/603,812

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A similar deficiency is found in the Schulman, et al. reference, which describes a single power supply 200 which supplies power from the received signal to all of the other functions including the receiver and transmitter. Nowhere, are independent power supply capacitors for each of the transmitter and receivers described or even suggested in the Schulman, et al. reference.

Finally, Figure 2 of the Weijand et al. reference, shows that the capacitors "12a" and "12b", cited by the Examiner, are merely part of the transmitters oscillator, in short these capacitors are merely resonance capacitors and do not form part of the power supply for the transmitter (see col. 5, lines 46-61). Although all capacitors of course store energy, the capacitors of the current invention, as defined by the claims are specifically power supply buffer capacitors, as outlined in the wiring diagrams shown in Figures 8 and 9 of the disclosure, and thus as a part of the actual power supply of the circuit, rather than as a portion of an oscillator circuit as contemplated in the Weijand et al. reference.

To illustrate the real functional and operational differences between the power supply capacitors utilized by Applicants and the resonance capacitors disclosed in the prior art, Applicants attach with this Amendment several references which explicitly spell out these differences. First, the publication to Duisters and Dijkmans (IEEE J. Solid-State Circuits, vol. 33, No. 7, pp. 947-955, July 1998) specifies the actual utility of a true "power supply" buffer capacitor. Second the circuit descriptions from EM Microelectronic-Martin,

Appln No. 09/603,812

Amdt date October 24, 2003

Reply to Office action of July 24, 2003

SA each describe the different functionality of "power supply buffer capacitors", such as those used in the instant invention to supply "sufficient" power to the transmitter/receiver, and "resonance capacitors", such as those used in the prior art references cited by the Examiner.

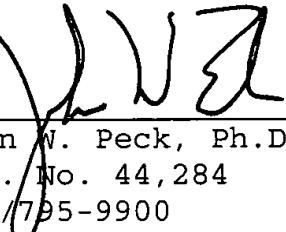
Accordingly, none of Schulman, et al., Barreras, Sr. et al., nor Weijand et al. teach, disclose or even suggest an implant comprising a telemetry device "...at least two power supply buffer capacitors for providing sufficient energy for the telemetry transmitter to transmit data, and . . . for providing sufficient energy for the telemetry receiver to receive data", as required in claim 1, or "...wherein the telemetry transmitter is connected to one of the power supply buffer capacitors for transmitting data, and the telemetry receiver is connected to a separate one of the power supply buffer capacitors for receiving data.", as required in claims 11 and 12, and therefore cannot anticipate, or make obvious, the claims of the current invention.

Claims 2 to 4, 7 to 8 and 10 are all directly or indirectly dependent on claim 1. Further, independent claims 5 and 6 incorporate all the limitations of claim 1. As such, these claims are believed allowable based upon claim 1.

**Appln No. 09/603,812
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In view of the foregoing amendments and remarks, consideration and allowance of this application are respectfully requested.

Respectfully submitted,
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